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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,474	11/21/2003	Yutaka Matsunobu	056203.49196C1	9359

23911 7590 05/31/2005

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EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	**PAPER NUMBER**
3618	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,474	MATSUNOBU ET AL.	
	Examiner	Art Unit	
	Frank Vanaman	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,7,9,13 and 17* is/are pending in the application.

4a) Of the above claim(s) *5,7 and 13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 9, 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Status of Application

1. Applicant's amendment, filed March 1, 2005 has been entered in the application. Claims 1, 5, 7, 9, 13 and 17 are pending. Claims 5, 7, and 13 are withdrawn from consideration as being directed to a non-elected species, as set forth in applicant's response of May 27, 2004, and the office action of June 23, 2004.

Non-Compliant Amendment

2. The examiner additionally notes that the format of the most recent amendment is again non-compliant, inasmuch as claims 5, 7, and 13 should be provided with status identifiers of "Withdrawn". In the interest of advancing prosecution, an office action on the merits follows.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 9, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (US 6,048,289, filed 3/1999, cited by applicant) in view of Fumio et al.(JP publication 09271151, cited by applicant). Hattori et al. teach a hybrid electric vehicle having an engine (2) an electric motor (4) connected in series to a drive shaft which is then connected to a CVT (5) and reduction gear (6) for driving the vehicle wheels, the reference teaching no forward/reverse switching gear (note figures 1, 3, 4, etc.), rather teaching that the motor may be driven in a reverse direction to drive the vehicle in reverse in the case of no reverse switching gear being provided (col. 7, lines 61-67). The reference of Hattori et al. fails to teach the motor as being a permanent magnet machine having a stator, a stator core around which a coil is wound, a rotor arranged in the stator with a plurality of permanent magnets with the rotor being non-symmetrical at each pole, having a magnet accommodating slot which having a greater width than a magnet width on a side associated with one rotational direction. Fumio et al. teach a motor structure including a stator (20) having an iron core (22) around which a coil (24) is wound, and a rotor (30) arranged inwardly from the stator separated by a stator-rotor gap, with a non-symmetric arrangement characterized by a plurality of permanent magnets (36) installed in magnet slots (figure 5) wherein the ratio of slot

width to magnet width is in the range of 1:0.5 to 1:0.9 (again, figure 5), with an open portion begin provided (50) in the slot in one rotational direction, for the purpose of delivering a greater torque in one direction of the rotor motion than the opposite direction. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the non-symmetric configuration of the magnet insertion openings as taught by Fumio et al. to the motor structure in the vehicle of Hattori et al., for the purpose of increasing the operational force which may be exerted by the motor in one rotational direction. As regards the provision of a protruded pole on a motor, the examiner takes Official Notice that the provision of a protruded pole on a motor is very old and well known, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the motor structure with a protruded pole to adjust the magnetic flux associated with the motor.

Also note that since Hattori teaches motor-only drive in a reverse direction (col. 7, lines 61-67), and in that it is well known to provide a vehicle reverse gear with the lowest speed/highest torque relationship, generally a higher torque relationship than even the first forward gear, it would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the motor such that a reverse drive direction of the motor would develop higher torque than a forward drive direction for the purpose of controlling the vehicle behavior to mirror a user's expectations based on commonly available vehicle with mechanical transmissions. As regards the particular ratio of forward to reverse torque, it would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the difference in torque to be in the range of 1:1.05 - 1.2 for the purpose of setting a forward to reverse torque relationship similar to that known in a mechanical transmission.

Response to Comments

5. Applicant's comments, filed with the amendment, have been carefully considered. Insofar as applicant has suggested that the references to Fumio and Hattori individually do not teach the claimed invention, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of

references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

As regards applicant's assertion that the reference to Fumio, used to modify the reference to Hattori, is limited to rotation in one direction only, applicant has provided no evidence to support this assertion, for example by citing a particular passage in the text of Fumio which positively limits the operation of Fumio's motor to one direction. If such is indeed the case, then such evidence should be cited to support the assertion. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965).

Applicant has asserted that Fumio has no need or reason for increasing the torque in one direction of rotation in comparison to an opposing direction, in view of the speed change mechanism, however there is no necessity that Fumio lack a transmission for the reference to teach a motor structure that performs the same function as that taught by applicant, namely the delivery of a higher torque in one rotational direction compared to the opposite direction.

Applicant's assertion that the "presently claimed invention specifically requires a machine and an engine connected to a drive shaft in series without a switching gear..." is noted, and indeed the reference to Hattori teaches such a structure. If applicant believes that the reference to Hattori does not teach a machine and engine connected to a drive shaft in series without a switching gear, then applicant is invited to positively assert such and provide evidence to support that assertion.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to one of the following fax servers:

Regular Communications/Amendments: 703-872-9326
After Final Amendments: 703-872-9327
Customer Service Communications: 703-872-9325

F. VANAMAN
Primary Examiner
Art Unit 3618

5/26/05